

REMARKS / ARGUMENTS

The present application includes pending claims 1-34, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 1, 2, 6, 10-12, 16, 20-22, 26, and 30-31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent Publication No. 2003/0007644, by Sprunk et al. (hereinafter, Sprunk et al.). Claims 3-5, 13-15 and 23-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of "Applied Cryptography", 2nd Edition, 1996 by Schneier (hereinafter, Schneier). Claims 7-9, 17-19 and 27-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of US Patent 4,864,615, issued to Bennett et al. (hereinafter, Bennett et al.). Claims 32-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of US Patent 7,028,014, issued to Naclerio. (hereinafter, Naclerio).

The Applicant respectfully traverses these objections and rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

REJECTION UNDER 35 U.S.C. § 102

I. Sprunk et al. Does Not Anticipate Claims 1, 2, 6, 10-12, 16, 20-22, 26, and 30-31

The Applicant first turns to the rejection of claims **1, 2, 6, 10-12, 16, 20-22, 26, and 30-31** under 35 U.S.C. 102(e) as being anticipated by Sprunk et al.. With regard to the anticipation rejections under 102(e), MPEP 2131 states that “[a] claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” See Manual of Patent Examining Procedure (MPEP) at 2131 (internal citation omitted). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” See *id.* (internal citation omitted).

A. Rejection of Independent Claims 1, 11 and 21 under 35 U.S.C. § 102(e)

With regard to the rejection of independent claim 1 under 35 U.S.C. §102(e), the Applicant maintains that Sprunk et al. does not disclose or suggest at least the limitation of “receiving at least a first input key, a second input key and a third input key,” as recited by the Applicant in independent claim 1. The response to the Applicant’s argument made in the Final Office Action is noted but not found persuasive. The Applicant’s argument is restated below.

More specifically, Sprunk et al does not teach that an initialization vector (IV) is a key, as argued by the examiner. The Final Office Action refers for support to Figure 4 and paragraph [0036] of Sprunk et al. and the examiner states that "... and the IV (Initial Value) is considered as one of key variation values and is qualified as a third input key". Paragraph [0036], however, does not support the examiners opinion that the IV is equal to a key. Paragraph [0036] pf Sprunk et al states:

FIG. 4 is a block diagram of a key sequence generator in accordance with the present invention. The key sequence generator comprises a Key Generator, a Key Space Reducer, and a Key Value Hash Function. An initialization vector (IV) is input to terminal 402, then provided to DES key generator 420 via terminals 405 and 415 of switch 410. DES key generators 420 and 425 receive Key 1 and Key 2, respectively, via terminals 422 and 424. The IV, Key 1 and Key 2 are known and supplied, for example, by a governmental agency. DES generator 420 uses the IV to generate a key that is used, in turn, by DES generator 425 to generate another key which is provided to AND function 435 via line 427. After the IV has been used by DES generator 420, the switch 410 is activated to couple terminals 415 and 417 and decouple terminals 405 and 415. DES generator 420 then receives the output of DES generator 425 as a feedback signal via line 428 and terminal 415, and continues to generate additional keys.

The Applicant respectfully asserts that nowhere in the cited paragraph [0036] does it say that IV is a key as indicated by the Examiner.

DES (Data Encryption Standard), as cited in the passage referred to by the examiner in paragraph [0036], is standardized by the National Institute of

Standards and Technology (NIST) and published in the Federal Information Processing Standards Publications (FIPS PUBS). The Applicant points out that FIPS PUB 81, which is one of the relevant standards for DES, entitled "DES Modes of Operation", published on December 2, 1980, defines "Initialization Vector" as follows:

INITIALIZATION VECTOR (IV): A binary vector used in the initial input block in the CFB and OFB modes and as the randomizing block that is exclusive- ORed with the first data block in the CBC mode.

where the abbreviation CFB stands for 'cipher feedback', OFB stands for 'output feedback' and CBC stands for 'cipher block chaining', as defined in FIPS PUBS 81. The Applicant notes that the definition of "Initialization Vector" makes no reference to the Initialization Vector being a key.

Furthermore, there is no indication in either Figure 4 or paragraph [0036] of Sprunk et al. of that an IV may be "received". Since neither receiving an IV nor that an IV is equal to a key is disclosed, taught or suggested in the passages cited in the Final Office Action of Sprunk et al., the applicant submits that claim 1 be made allowable and the rejection withdrawn.

Accordingly, independent claim 1 is not anticipated by Sprunk et al. and is allowable. Independent claims 11 and 21 are similar in many respect to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 11 and 21 are also allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

B. Rejection of Dependent Claims 2, 6, 10, 12, 16, 20, 22, 26, 30 and 31

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 102(e) as being anticipated by Sprunk et al. has been overcome and request that the rejection be withdrawn. Additionally, claims 2, 6, 10, 12, 16, 20, 22, 26, 30 and 31 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable.

Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1, 2, 6, 10-12, 16, 20-22, 26, and 30-31.

REJECTION UNDER 35 U.S.C. § 103

Claims 3-5, 13-15 and 23-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of "Applied Cryptography", 2nd Edition, 1996 by Schneier. Claims 7-9, 17-19 and 27-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of Bennett et al. Claims 32-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sprunk et al., in view of Naclerio.

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The Applicant notes that all rejections under 35 U.S.C. §103(a) are rejections of dependent claims that depend on independent claims 1, 11 and 21. Since the independent claims 1, 11 and 21 have not been objected to and are believed to be allowable, the Applicant submits that the rejection of dependent claims 3-5, 13-15, 23-25, 7-9, 17-19, 27-29 and 32-34 under 35 U.S.C. §103(a) be withdrawn and the claim be made allowable.

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CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-34 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Attorney at (312) 775-8176.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: August 9, 2007

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